

AWS A5.16 CLASSIFICATION	UNS	EN ISO/DIN	MECHANICAL PROPERTIES			WELD DEPOSIT WEIGHT %											APPLICATIONS	
			RP0.2 (N/mm ²)	Rm (N/mm ²)	A5 (%)	C	O	N	H	Fe	Al	V	Pd	Mo	Ni	Ti		
ERTi-1	R50100	EN ISO 24034: STi-0100 DIN 1737: SG Ti 1	250	320	-	< 0.03	0.03 - 0.10	< 0.012	< 0.005	< 0.08	-	-	-	-	-	-	rem	ERTi-1: Grade 1 is the lowest strength unalloyed (or Commercially Pure-CP) grade. Grade 1 is used in applications where ductility is paramount. The weld deposit is ductile and offers excellent corrosion resistance in oxidizing environments. The purity and corrosion resistance makes the alloy a preferred choice in many applications to prevent or solve problems.
ERTi-2	R50120	EN ISO 24034: STi 0120 (Ti 99,6) DIN: W.Nr. 3.7036 DIN 1737: SG Ti 2	275	395 - 540	20	< 0.08	< 0.25	< 0.18	< 0.013	< 0.05	-	-	-	-	-	-	rem	ERTi-2 is developed for welding Titanium grade 1, 2, 3 and 4. This alloy offers excellent Weldability. The weld deposit is ductile and offers excellent corrosion resistance in oxidizing environments. The unique combination of mechanical strength and corrosion resistance makes the alloy a preferred choice in many applications to prevent or solve problems.
ERTi-5	R56402	EN ISO 24034: STi-6402c DIN: W. Nr. : 3.7165	> 890	> 810	-	< 0.05	0.12 - 0.20	< 0.03	< 0.015	< 0.22	5.5 - 6.7	3.5 - 4.5	-	-	-	-	rem	Excellent weldability, and can be heat treated to a higher strength or toughness. Grade 5 is used in aircraft components such as landing gear, wing spars, and compressor blades. Its corrosion resistance is generally comparable to Grade 2 and it is often used in corrosion service where higher strength is required, particularly in shafts, high strength bolting. The weld deposit is ductile and offers excellent corrosion resistance in oxidizing environments. The unique combination of mechanical strength and corrosion resistance makes the alloy a preferred choice in many applications to prevent or solve problems.
ERTi-7	R52401	EN ISO 24034: STi-2401 DIN: W. Nr. : 3.7235	275	400	20	< 0.03	0.08 - 0.16	< 0.015	< 0.008	< 0.12	-	-	0.12 - 0.25	-	-	-	rem	Titanium Grade 7 has the same mechanical properties as Grade 2. The 0.12 wt% palladium addition improves corrosion performance under mildly reducing conditions or where crevice or under-deposit corrosion is a problem. ERTi-7 can be considered for welding Grade 2 or 16 where improved corrosion performance is desired.
ERTi-9	R56321	EN ISO 24034: STi-6321 DIN: W. Nr. : 3.7195	483	621	14	< 0.03	0.06 - 0.12	< 0.012	< 0.005	< 0.20	2.5 - 3.5	2.0 - 3.0	-	-	-	-	rem	ERTi-9. Gr. 9 offers 20-50% higher strength than C.P. grades, but is more formable and weldable than Ti-6Al-4V. Grade 9 combines strength, weldability and formability. The alloy has excellent formability plus higher tensile strength than the strongest unalloyed grade.
ERTi-12	R53401	EN ISO 24034: STi-3401 DIN: W. Nr. : 3.7105	345	483	-	< 0.03	0.08 - 0.16	< 0.015	< 0.008	< 0.15	-	-	-	0.2 - 0.4	0.6 - 0.9	-	rem	Grade 12 (Ti 0.8Ni0.3Mo) is an intermediate strength grade originally developed to provide enhanced crevice-corrosion resistance in high temperature brines, but at lower cost than Grade 7. The improved performance is believed to be the result of Ni++ and Mo++ ions that alter the surface electrochemistry of the material in the crevice or under a surface deposit. Grade 12 has better elevated temperature properties than Grade 2 or 3 and is sometimes specified for pressure vessels or piping for its superior strength alone.



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